

Appl. No. 09/127,644  
Amdt. dated February 16, 2005  
Reply to Decision on Appeal of September 27, 2004

PATENT

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

Please cancel claims 1-22.

- 1 23. (New) A magnetically journaled rotational arrangement comprising a
- 2 substantially disc-shaped or ring-shaped magnetically journaled rotor and
- 3 a stator comprising:
  - 4 means for generating a field, wherein said field produces rotation of the
  - 5 rotor having means for generating a unipolar bias magnetic flux spatially modulated when
  - 6 viewed in the circumferential direction; and
  - 7 a plurality of permanent magnets arranged to cooperate with the means
  - 8 provided on the rotor generating the spatially modulated bias magnetic flux and producing or
  - 9 reinforcing the magnetic journaling of the rotor,
  - 10 wherein the stator effecting the magnetic journaling of the rotor surrounds
  - 11 the ring or disc-shaped rotor,
  - 12 wherein the stator plane and the rotor plane coincide and from a bearing
  - 13 plane, and
  - 14 wherein the means for generating the field are arranged in the segments
  - 15 between the permanent magnets in the stator so that the motor plane in which the rotation of the
  - 16 rotor is produced and the bearing plane in which the journaling of the rotor is produced
  - 17 coincide.

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1                   24. (New) A rotational arrangement in accordance with claim 23 wherein the  
2 means for the production of the field which effects the rotation of the rotor and which is arranged  
3 in the segments between the permanent magnets has U-shaped coil cores with windings, with the  
4 U-shaped coil cores being arranged in the bearing plane.

1                   25. (New) A rotational arrangement in accordance with claim 23 wherein the  
2 means for the production of the field which effects the rotation of the rotor and which is arranged  
3 in the segments between the permanent magnets has U-shaped coil cores with windings, with the  
4 U-shaped coil cores being arranged perpendicular to the bearing plane.

1                   26. (New) A rotational arrangement in accordance with claim 23 wherein the  
2 permanent magnets are arranged at both sides of the disc-shaped or ring-shaped rotor.

1                   27. (New) A rotational arrangement in accordance with claim 23 wherein the  
2 permanent magnets have an axial or a radial magnetization.

1                   28. (New) A rotational arrangement in accordance with claim 23 wherein  
2 permanent magnets are provided both on the rotor and on the stator; and wherein both the  
3 permanent magnets provided on the rotor and the permanent magnets arranged on the stator are  
4 magnetized in the axial direction.

1                   29. (New) A rotational arrangement in accordance with claim 23 wherein  
2 permanent magnets are provided both on the rotor and on the stator; and wherein both the  
3 permanent magnets provided on the rotor and the permanent magnets arranged on the stator are  
4 magnetized in the radial direction.

1                   30. (New) A rotational arrangement in accordance with claim 23 wherein  
2 permanent magnets are provided both on the rotor and on the stator; and wherein the permanent  
3 magnets provided on the rotor are magnetized in the axial direction while the permanent magnets  
4 arranged on the stator are magnetized in the radial direction or vice versa.

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1                   31. (New) A rotational arrangement in accordance with claim 23 wherein  
2 control windings are provided in the stator in order to control the spatially modulated unipolar  
3 bias magnetic flux.

1                   32. (New) A rotational arrangement in accordance with claim 23 wherein the  
2 stator producing the magnetic journaling of the rotor is designed to be substantially ring-shaped  
3 and surrounds the ring or disc-shaped rotor, with the stator plane and the rotor plane coinciding  
4 and forming the bearing plane; and wherein the stator comprises at least one further ring or disc-  
5 shaped motor stator which is arranged in a motor plane parallel to the bearing plane.

1                   33. (New) A magnetically journalled rotational arrangement comprising a  
2 substantially disc-shaped or ring-shaped magnetically journalled rotor and  
3                   a stator comprising:

4                   means for generating a field, wherein said field produces rotation of the  
5 rotor having means for generating a unipolar bias magnetic flux spatially modulated when  
6 viewed in the circumferential direction; and

7                   a plurality of permanent magnets arranged on both sides of the rotor to  
8 cooperate with the means provided on the rotor generating the spatially modulated bias magnetic  
9 flux and producing or reinforcing the magnetic journaling of the rotor,

10                   wherein the stator plane and the rotor plane coincide and from a bearing  
11 plane, and

12                   wherein the stator producing the magnetic journaling of the rotor  
13 surrounds the ring or disc-shaped rotor, and

14                   the stator further comprises two ring-shaped motor stators, wherein the  
15 first motor stator is arranged in a first motor plane parallel to the bearing plane on the one side of  
16 the bearing stator and the second motor stator in a second motor plane parallel to the bearing  
17 plane.

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1                   34. (New) A magnetically journalled rotational arrangement comprising a  
2 substantially disc-shaped or ring-shaped magnetically journalled rotor and  
3 a stator comprising:

4                   means for generating a field, wherein said field produces rotation of the  
5 rotor having means for generating a unipolar bias magnetic flux spatially modulated when  
6 viewed in the circumferential direction; and

7                   a plurality of permanent magnets arranged to cooperate with the means  
8 provided on the rotor generating the spatially modulated bias magnetic flux and producing or  
9 reinforcing the magnetic journalling of the rotor,

10                  wherein the stator plane and the rotor plane coincide and from a bearing  
11 plane, and

12                  wherein the stator producing the magnetic journalling of the rotor  
13 surrounds the ring or disc-shaped rotor, and

14                  the stator further comprises a disc-shaped motor having a disc rotor  
15 winding and arranged in a motor plane parallel to the bearing plane.

1                   35. (New) A rotational arrangement in accordance with claim 23 wherein the  
2 means for the production of the field which effects the rotation of the rotor comprises a rotatable  
3 drive which can be magnetically coupled to the rotor and the axis of rotation of which coincides  
4 with the axis of rotation of the rotor.

1                   36. (New) A rotational arrangement in accordance with claim 35 wherein the  
2 drive comprises permanent magnets which are magnetized in the axial direction.

1                   37. (New) A rotational arrangement in accordance with claim 35 wherein the  
2 drive comprises permanent magnets which are magnetized in the radial direction.